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vector quantization compression

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[BOOK] Vector Quantization and Signal Compression - [all 2 versions »](#)

A Gersho, RM Gray - 1992 - books.google.com

VECTOR QUANTIZATION AND SIGNAL COMPRESSION is devoted to the theory and practice of signal **compression**; ie, data **compression** applied to signals such as speech ...

[Cited by 3467](#) - [Related Articles](#) - [Web Search](#)
The lossless compression of AVIRIS images by vector quantization - [all 5 versions »](#)
MJ Ryan, JF Arnold, ADF Acad, ACT Canberra - Geoscience and Remote Sensing, IEEE Transactions on, 1997 - [ieeexplore.ieee.org](#)
 ... Whilst it is not practical to re-order bands into NER groups in a **vector quantization compression** scheme, as illustrated in Fig. ...

[Cited by 70](#) - [Related Articles](#) - [Web Search](#) - [BL Direct](#)
Fast texture synthesis using tree-structured vector quantization - [all 34 versions »](#)
LY Wei, M Levoy - Proceedings of the 27th annual conference on Computer ..., 2000 - [portal.acm.org](#)
 ... We accelerate this synthesis process using tree-structured **vector quantization**. ... Keywords: Texture Synthesis, **Compression** Algorithms, Image Processing ...

[Cited by 566](#) - [Related Articles](#) - [Web Search](#)
Combining Image Compression and Classification Using Vector Quantization - [all 7 versions »](#)
KL Oehler, RM Gray - 1995 - [doi.ieeecomputersociety.org](#)
 ... methods have long been used for a variety of signal processing applications, including both classification and **vector quantization** for signal **compression**. ...

[Cited by 90](#) - [Related Articles](#) - [Web Search](#) - [BL Direct](#)
Vector Quantization - [all 6 versions »](#)

RM Gray - Readings in Speech Recognition, 1984 - books.google.com

3.3 Vector Quantization 75 **Vector Quantization** Robert M. Gray A **vector quantizer** is a ... The goal of such a system is data **compression**: to reduce the bit rate so ...

[Cited by 1256](#) - [Related Articles](#) - [Web Search](#)
[CITATION] Vector Quantization and Signal Compression

RM Gray - 1991 - Kluwer

[Cited by 80](#) - [Related Articles](#) - [Web Search](#)
Image coding using vector quantization: a review - [all 4 versions »](#)
NM Nasrabadi, RA King - Communications, IEEE Transactions on, 1988 - [ieeexplore.ieee.org](#)
 ... VQ's). Recently, there have been several review articles on general technique of image **compression** [3]-[6]. In particular, **vector quantization** has been ...

[Cited by 481](#) - [Related Articles](#) - [Web Search](#)
[PDF] QccPack: An open-source software library for quantization, compression, and coding - [all 20 versions »](#)
JE Fowler - Applications of Digital Image Processing XXIII - [gri.msstate.edu](#)
 ... 8. A. Gersho and RM Gray, **Vector Quantization and Signal Compression**, Kluwer international series in engineering and computer science, Kluwer Academic ...

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Patents Any status - Issued patents - Applications Patents 1 - 10 on **vector quantization compression insertion lower dimension**. (0.04 seconds)

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Voice analysis-synthesis method using noise having diffusion which varies ...

US Pat. 5878388 - Filed Jun 9, 1997 - Sony Corporation

Thus, employment of **vector quantization** can be considered. ... groups and finding a representative values for each of the groups to **lower** the M **dimension** to ...

High efficiency encoding method

US Pat. 5765127 - Filed Dec 6, 1993

Thus, 44-point data are obtained. **quantization**, and to improve the **compression** ratio in **vector** Since it is not necessary to transmit a DC value (direct ...

[APPLICATION] Dimensional **vector** and variable resolution **quantization**

US Pat. App 10/587,907 - Filed Jan 30, 2004 - France Telecom

coding and/or decoding of digital signals, by **vector quantization** at ... that may not be obtained by **insertion** into codevectors of **lower dimension** of the ...

Method and apparatus for low frequency removal in **vector quantization**

US Pat. 5235418 - Filed Nov 19, 1991 - Scientific-Atlanta, Inc.

See, three input image vectors are provided for each block in for example, RL Baker, "**Vector Quantization** of Digi- 45 a color image, one containing Y data, ...

Method and apparatus for enhanced transaction card **compression** employing ...

US Pat. 5789726 - Filed Nov 25, 1996 - Eastman Kodak Company

50 For Image **Compression**. Storage. And Retrieval On Mag- **Vector quantization** requires me formation of a codebook netic Transaction Cards," by Ray, et al.). ...

[APPLICATION] METHOD FOR COMPRESSING AND DECOMPRESSING A SEQUENCE OF NUMBERS

US Pat. App 11/685,467 - Filed Mar 13, 2007 - EXPWAY

For example, if the document contains a **vector** graphical image which is ...

of points in an image, a **quantization** step is determined for each rank, ie, ...

Method for minimal-logic non-linear filter implementation

US Pat. 6904179 - Filed May 30, 2002 - Xerox Corporation

Each interval is comprised of a **lower** and upper **vector**. ... Examples are object detection, image enhancement, data **compression**, thresholding, noise-removal, ...

Low visibility watermarks using an out-of-phase color

US Pat. 6721440 - Filed Jul 2, 2001 - Digimarc Corporation

1 is a diagram of a color space depicting how to scale a color **vector** to black to effect ... a given quantizer (eg, in **Quantization** Index Modulation), etc. ...

Detection of out-of-phase low visibility watermarks

US Pat. 6763123 - Filed Aug 20, 2001 - Digimarc Corporation

1 is a diagram of a color space depicting how to scale a color **vector** to black to effect ... a given quantizer (eg, in **Quantization** Index Modulation), etc. ...

[APPLICATION] Low visibility watermarks using an out-of-phase color

US Pat. App 9/898,901 - Filed Jul 2, 2001

1 is a diagram of a color space depicting how to scale a color **vector** to black to effect ... a given quantizer (eg, in **Quantization** Index Modulation), etc. ...

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[Vector quantization based on Gaussian mixture models - all 4 versions »](#)

P Hedelin, J Skoglund - Speech and Audio Processing, IEEE Transactions on, 2000 - [ieeexplore.ieee.org](#)

... However, this numerical methodology is only feasible for **low dimensions** and when the ... we address pre- dicting the performance of **vector quantization** using high ...

[Cited by 71](#) - [Related Articles](#) - [Web Search](#) - [BL Direct](#)

[Quality driven gold washing adaptive vector quantization and its application to ECG data compression - all 4 versions »](#)

SG Miaou, HL Yen - Biomedical Engineering, IEEE Transactions on, 2000 - [ieeexplore.ieee.org](#)

... error denoted by Let be the **quantization** error induced ... AVQ AND ITS APPLICATION TO ECG DATA **COMPRESSION** ... On the contrary, smaller **vector dimensions** are given to ...

[Cited by 25](#) - [Related Articles](#) - [Web Search](#) - [BL Direct](#)

[Wavelet-based ECG compression using dynamic vector quantization with tree codevectors in single ... - all 4 versions »](#)

SG Miaou, HL Yen, CL Lin - Biomedical Engineering, IEEE Transactions on, 2002 - [ieeexplore.ieee.org](#)

... constrained" by the predetermined threshold and the **insertion** of new ... MIAOU et al.:

WAVELET-BASED ECG **COMPRESSION** USING DYNAMIC **VECTOR QUANTIZATION** 679 ...

[Cited by 44](#) - [Related Articles](#) - [Web Search](#) - [BL Direct](#)

[Algorithms for fast vector quantization - all 11 versions »](#)

S Arya, DM Mount - Data Compression Conference, 1993. DCC'93., 1993 - [ieeexplore.ieee.org](#)

... **quantization**, a technique used in the **compression** of speech ... each node U that we visit we **insert** U'S ... SNR is the most significant one for **vector quantization**. ...

[Cited by 57](#) - [Related Articles](#) - [Web Search](#)

[Secure spread spectrum watermarking for multimedia - all 21 versions »](#)

U Cox, J Kilian, FT Leighton, T Shamoon - Image Processing, IEEE Transactions on, 1997 - [ieeexplore.ieee.org](#)

... distributed (iid) Gaussian random **vector** that is ... are algorithms that **insert** messages into ... transformations, such as **compression**, **quantization**, and manipulation ...

[Cited by 2895](#) - [Related Articles](#) - [Web Search](#) - [BL Direct](#)

[A greedy tree growing algorithm for the design of variable rate vector quantizers \[image compression\] - all 3 versions »](#)

EA Riskin, RM Gray - Signal Processing, IEEE Transactions on [see also Acoustics, ..., 1991 - [ieeexplore.ieee.org](#)

... VQ is the extension of scalar **quantization** to a ... data due to error introduced by the **compression** scheme ... The **vector dimension** is 4, meaning 2 x 2 subblocks of the ...

[Cited by 102](#) - [Related Articles](#) - [Web Search](#)

[... **compression** of volumetric medical images using distortion-constrained adaptive **vector quantization** - all 6 versions »](#)

SG Miaou, ST Chen - Medical Imaging, IEEE Transactions on, 2004 - [ieeexplore.ieee.org](#)

... duced **quantization** distortion ... codevector that is similar enough to the tree **vector**

to be ... or the legal consider- ation even though its **compression** efficiency is ...

[Cited by 10](#) - [Related Articles](#) - [Web Search](#) - [BL Direct](#)

[Adaptive **vector quantization** using generalized threshold replenishment - all 8 versions »](#)

JE Fowler, SC Ahalt - Proceedings of the 1997 IEEE Data Compression Conference, 1997 - [doi.ieeecomputersociety.org](#)

... Step 6a: Insert X_t in the front of C_t ... Neural Network Approach for Adaptive **Vector**

Quantization of Images ... S. Shende, and K. Sayood, "Online **Compression** of Video ...

[Cited by 13](#) - [Related Articles](#) - [Web Search](#)

[A novel adaptive **vector quantization** method for memory reduction inMPEG-2 HDTV decoders - all 3 versions »](#)

R Bruni, A Chimienti, M Lucenteforte, D Pau, R ... - Consumer Electronics, IEEE Transactions on, 1998 - [ieeexplore.ieee.org](#)

... The **insertion** of an adaptive **vector** quantizer in place of the ... [4] A.Gersho, RM Gray,

"**Vector quantization** and sig- nal **compression**", Kluwer Academic ...

[Cited by 13](#) - [Related Articles](#) - [Web Search](#) - [BL Direct](#)

[Systolic architectures for **vector quantization** - all 3 versions »](#)

GA Davidson, PR Cappello, A Gersho - Acoustics, Speech, and Signal Processing [see also IEEE ...], 1988 - [ieeexplore.ieee.org](#)

... terms per second (for any **vector dimension** between 1 ... SYSTOLIC ARCHITECTURES FOR **VECTOR**

QUANTIZATION 1653 A major ... advance in VQ speech **compression** large memory ...

[Cited by 50](#) - [Related Articles](#) - [Web Search](#)

Key authors: [I Cox](#) - [A Said](#) - [J Kilian](#) - [T Shamoon](#) - [F Leighton](#)

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adaptive codebook

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Speech classification embedded in **adaptive codebook** search for lowbit-rate CELP coding - all 2 versions

CC Kuo, FR Jean, HC Wang - Speech and Audio Processing, IEEE Transactions on, 1995 - [ieeexplore.ieee.org](#)

... Speech Classification Embedded in **Adaptive Codebook** Search for Low Bit-Rate CELP

Coding ... Therefore, a wider range is required in **adaptive codebook** search. ...

[Cited by 21](#) - [Related Articles](#) - [Web Search](#)

The **adaptive** multi-rate speech coder

E Ekudden, R Hagen, I Johansson, J Svedberg - Speech Coding Proceedings, 1999 IEEE Workshop on, 1999 - [ieeexplore.ieee.org](#)

... 3.2 **Adaptive Codebook** The **adaptive codebook** (CB) search employs an open-loop pitch estimate to restrict the search range of the absolute coded lags. ...

[Cited by 33](#) - [Related Articles](#) - [Web Search](#)

Bus data encoding with coupling-driven **adaptive** code-book method for low power data transmission

S Komatsu, M Ikeda, K Asada - Solid-State Circuits Conference, 2001. ESSCIRC 2001. ..., 2001 - [ieeexplore.ieee.org](#)

... We have proposed a **code-book** based coding scheme, **adaptive code-book** encoding, which reduces bus signal **Codebook** Minimum Hamming Distance Detector Input Step 1 ...

[Cited by 15](#) - [Related Articles](#) - [Web Search](#)

Vector sum excited linear prediction (VSELP) speech coding at 8kbps

IA Gerson, MA Jasiuk, M Inc, IL Schaumburg - Acoustics, Speech, and Signal Processing, 1990. ICASSP-90., ..., 1990 - [ieeexplore.ieee.org](#)

... The first is from the long term ("pitch") predictor state, or **adaptive codebook**

[4], The second and third sources are from two VSELP excitation codebooks. ...

[Cited by 117](#) - [Related Articles](#) - [Web Search](#)

[PDF] Huffman coding of DCT coefficients using dynamic codeword assignment and **adaptive codebook** selection - all 4 versions »

B Jeon, J Park, J Jeong - SIGNAL PROCESS IMAGE COMMUN, 1998 - [media.skku.ac.kr](#)

... assignment and **adaptive codebook** selection Byeungwoo Jeo⁺, Juha Parkb, Jechang Jeongc ... 3. Huffman coding with **adaptive codebook** selection ...

[Cited by 15](#) - [Related Articles](#) - [View as HTML](#) - [Web Search](#)

iLBC-a linear predictive coder with robustness to packet losses

SV Andersen, WB Kleijn, R Hagen, J Linden, MN ... - Speech Coding, 2002, IEEE Workshop Proceedings., 2002 - [ieeexplore.ieee.org](#)

... TERM PREDICTIVE CODING The asence of the codec is linear predictive coding (LPC) and block based coding of the LPC residual signal using an **adaptive codebook**. ...

[Cited by 26](#) - [Related Articles](#) - [Web Search](#)

[... with backward and inverse filtered target matching and a tree structured mutitap **adaptive codebook** ...](#)

[- all 5 versions »](#)

D Mukherjee, E Paksoy - US Patent 6,161,086, 2000 - freepatentsonline.com

... Title: Low-complexity speech coding with backward and inverse filtered target matching and a tree structured mutitap **adaptive codebook** search. ...

[Cited by 13](#) - [Related Articles](#) - [Cached](#) - [Web Search](#)

[Improved speech quality and efficient vector quantization in SELP](#)

WB Kleijn, DJ Krasinski, RH Ketchum - Acoustics, Speech, and Signal Processing, 1988. ICASSP-88., ..., 1988 - [ieeexplore.ieee.org](#)

... IL Abstract A SELP (Stochastically Excited Linear Prediction) algorithm consisting of a two-stage vector quantization using an **adaptive codebook** and a ...

[Cited by 58](#) - [Related Articles](#) - [Web Search](#)

[Real-time foreground-background segmentation using **codebook** model](#) - [all 2 versions »](#)

K Kim, TH Chalidabhongse, D Harwood, L Davis - Real-Time Imaging, 2005 - Elsevier

... In addition to the basic algorithm, two features improving the algorithm are presented—layered modeling/detection and **adaptive codebook** updating. ...

[Cited by 55](#) - [Related Articles](#) - [Web Search](#)

[CELP speech coding based on an **adaptive** pulse position **codebook**](#) - [all 3 versions »](#)

T Amada, K Miseki, M Akamine - Acoustics, Speech, and Signal Processing, 1999. ICASSP'99. ..., 1999 - [ieeexplore.ieee.org](#)

... Position Excitation Analysis **Adaptive** Position **Codebook** ... **adaptive** code vector is selected from the **adaptive code- book**, (2) smoothed absolute amplitude of the ...

[Cited by 10](#) - [Related Articles](#) - [Web Search](#) - [BL Direct](#)

Key authors: [R Salami](#) - [I Gerson](#) - [J Adoul](#) - [C Laflamme](#) - [P Kroon](#)

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Image coding using **vector quantization**: a review - all 4 versions »

 NM Nasrabadi, RA King - Communications, IEEE Transactions on, 1988 - [ieeexplore.ieee.org](#)

 ... the proposed **adaptive vector quantization** system. The image is subdivided into nonoverlapping subimages, and for each subimage, a separate **codebook** consisting ...

[Cited by 491](#) - [Related Articles](#) - [Web Search](#)

Image Compression Using **Adaptive Vector Quantization** - all 3 versions »

 M Goldberg, P Boucher, S Shlien - Communications, IEEE Transactions on [legacy, pre-1988], 1986 - [ieeexplore.ieee.org](#)

 ... This technique reduces **code- book** generation time and, by ... of the operations involved in **adaptive** image **vector** ... components were used for **codebook** generation. ...

[Cited by 45](#) - [Related Articles](#) - [Web Search](#)

[BOOK] **Vector Quantization** and Signal Compression - all 2 versions »

 A Gersho, RM Gray - 1992 - [books.google.com](#)

 ... **Vector Quantization** 587 16.1 Introduction 587 16.2 Mean Adaptation 590 16.3

 Gain-**Adaptive Vector Quantization** 594 16.4 Switched **Codebook** Adaptation 602 16.5 ...

[Cited by 3467](#) - [Related Articles](#) - [Web Search](#)

Improved versions of learning **vector quantization**

 T Kohonen - Neural Networks, 1990., 1990 IJCNN International Joint ..., 1990 - [ieeexplore.ieee.org](#)

 ... of self-organizing Neural Networks, and among **adaptive** VQ methods ... It is not at all obvious how the **codebook** vectors in **Vector Quantization** ought to be ...

[Cited by 215](#) - [Related Articles](#) - [Web Search](#)

Vector Quantization - all 6 versions »

 RM Gray - Readings in Speech Recognition, 1984 - [books.google.com](#)

 ... example is given of a simple **adaptive** predictive **vector** ... being designed so that the new **codebook** available from ... 0, 0, 1 0, 1, 0 reconstruction **code book** Figure 6 ...

[Cited by 1256](#) - [Related Articles](#) - [Web Search](#)

Vector quantization: A pattern-matching technique for speech coding - all 2 versions »

 A Gersho, V Cuperman - Communications Magazine, IEEE, 1983 - [ieeexplore.ieee.org](#)

 ... kb/s the quality of ADPCM or **adaptive** delta modulation ... k dB for each doubling of the **codebook** size (for ... entire **vector**), where k is the dimension of the **vector**. ...

[Cited by 62](#) - [Related Articles](#) - [Web Search](#)

Efficient **vector quantization** of LPC parameters at 24 bits/frame - all 6 versions »

 KK Paliwal, BS Atal - Speech and Audio Processing, IEEE Transactions on, 1993 - [ieeexplore.ieee.org](#)

 ... First, a large **codebook** requires prohibitively large amount of training data ... the storage and computational requirements for **vector quantization** encoding will ...

[Cited by 377](#) - [Related Articles](#) - [Web Search](#)

Vector quantization of images based upon the Kohonenself-organizing feature maps - all 2 versions »

 NM Nasrabadi, Y Feng - Neural Networks, 1988., IEEE International Conference on, 1988 - [ieeexplore.ieee.org](#)

 ... 3. It is still not clear which **codebook** is a ... the images coded by the Kohonen **code-book** design seem ... Self-Organization is a non-linear **adaptive** technique where ...

[Cited by 158](#) - [Related Articles](#) - [Web Search](#)

Image coding using **vector quantization**

A Gersho, B Ramamurthi - Acoustics, Speech, and Signal Processing, IEEE International ..., 1982 - [ieeexplore.ieee.org](#)

... improve performance, we have also used a simple **adaptive** technique for **codebook** design. ... shade (non—edge) cell and a separate **code—book** design is ...

[Cited by 62](#) - [Related Articles](#) - [Web Search](#)

Fast full search equivalent encoding algorithms for imagecompression using **vector quantization** - all 4 versions »

CM Huang, Q Bi, GS Stiles, RW Harris - Image Processing, IEEE Transactions on, 1992 - [ieeexplore.ieee.org](#)

... The address of the **code- book** entry most similar to the signal **vector** is then ... to fetch the same entry from an iden- tical **codebook**, thus reconstructing ...

[Cited by 106](#) - [Related Articles](#) - [Web Search](#)

Key authors: [R Gray](#) - [A Gersho](#) - [N Nasrabadi](#) - [S Ahalt](#) - [K Paliwal](#)



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[BOOK] [Vector Quantization and Signal Compression](#) - [all 2 versions »](#)

A Gersho, RM Gray - 1992 - books.google.com

... 620 16.9 **Vector** Excitation Coding 621 16.10 Problems 628 17 **Variable Rate Vector Quantization** 631 17.1 **Variable Rate Coding** 631 17.2 **Variable Dimension VQ** 634 ...

[Cited by 3532](#) - [Related Articles](#) - [Web Search](#)

[Optimal nonlinear interpolative vector quantization](#) - [all 3 versions »](#)

A Gersho - Communications, IEEE Transactions on, 1990 - ieeexplore.ieee.org

... In interpolative VQ, (IVQ) a high **dimensional** signal **vector** ... lower complexity than direct **vector quantization** (VQ) of ... then estimates the signal **vector** from the ...

[Cited by 71](#) - [Related Articles](#) - [Web Search](#)

[Variable-rate multi-stage vector quantization for image coding](#)

YS Ho, A Gersho - Acoustics, Speech, and Signal Processing, 1988. ICASSP-88., ..., 1988 - ieeexplore.ieee.org

... each of which encodes the **quantization** error generated ... to convert between different **vector dimensions** in the ... **Variable-rate** encoding increases the compression ...

[Cited by 27](#) - [Related Articles](#) - [Web Search](#)

[Variable dimension vector quantization of linear predictive coefficients of speech](#)

PA Chou, T Lookabaugh - Acoustics, Speech, and Signal Processing, 1994. ICASSP-94., ..., 1994 - ieeexplore.ieee.org

Page 1 0-71103-1775-0/94 \$3.(X1 © 1994 IEEE **VARIABLE DIMENSION VECTOR QUANTIZATION OF LINEAR PREDICTIVE COEFFICIENTS OF SPEECH** Philip A. Chou¹ Tom Lookabaugh² ...

[Cited by 17](#) - [Related Articles](#) - [Web Search](#) - [BL Direct](#)

[PS] [A growing neural gas network learns topologies](#) - [all 10 versions »](#)

B Fritzke ... - Advances in Neural Information Processing Systems, 1995 - pikas.inf.tu-dresden.de

... possibly innite) number of **n-dimensional** input signals ... 9. Decrease all error **variables** by multiplying ... model are clustering (as shown) and **vector quantization**. ...

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[Vector quantization of image subbands: a survey](#) - [all 10 versions »](#)

PC Cosman, RM Gray, M Vetterli - Image Processing, IEEE Transactions on, 1996 - ieeexplore.ieee.org

... indexes produced by quantizing (scalar or **vector**) another sequence X ... is the set of all **k-dimensional** vectors with ... vectors), or they can map **variable** numbers of ...

[Cited by 131](#) - [Related Articles](#) - [Web Search](#) - [BL Direct](#)

Vector quantization of harmonic magnitudes for low-rate speechcoders - [all 2 versions »](#)

P Lupini, V Cuperman - Global Telecommunications Conference, 1994. GLOBECOM'94.' ... - [ieeexplore.ieee.org](#)

... the use of all-pole (LPC) modeling [5], or spectral **interpolation** [6, 71. Recently, a tech- nique called **Variable Dimension Vector Quantization** (VDVQ) [8] has ...

[Cited by 18](#) - [Related Articles](#) - [Web Search](#) - [BL Direct](#)

[PS] Vector quantization with a growing and splitting elastic net - [all 8 versions »](#)

B Fritzke - Proc. ICANN, 1993 - [ki.inf.tu-dresden.de](#)

... which is subtracted from the error **variables** of q ... of the 3600 blocks by the **16-dimensional vector** of hidden ... We presented a new **vector quantization** method which ...

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Using a perception-based frequency scale in waveform **interpolation** - [all 3 versions »](#)

J Thyssen, WB Kleijn, R Hagen - Acoustics, Speech, and Signal Processing, 1997. ICASSP-97., ..., 1997 - [ieeexplore.ieee.org](#)

... will be reduced, but not removed, with **interpolation** between harmonics ... this: i) the modified ERB-rate scale and ii) **variable-dimension vector quantization**. ...

[Cited by 11](#) - [Related Articles](#) - [Web Search](#) - [BL Direct](#)

Dispersion phase **vector quantization** for enhancement of waveforminterpolative coder - [all 6 versions »](#)

O Gottiesmann - Acoustics, Speech, and Signal Processing, 1999. ICASSP'99. ..., 1999 - [ieeexplore.ieee.org](#)

... pitch period and, therefore, a **variable dimension VQ** has ... such that vectors of **dimension** smaller than ... A. Gersho, and R. Gray, "**Vector Quantization** and Signal ...

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Key authors: [A Gersho](#) - [R Gray](#) - [J Canny](#) - [M Levoy](#) - [P Hanrahan](#)

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[Quantization resolution and limit cycling in digitally controlled PWM converters - all 9 versions »](#)

AV Peterchev, SR Sanders - Power Electronics, IEEE Transactions on, 2003 - [ieeexplore.ieee.org](#)

... 301 **Quantization Resolution** and Limit Cycling in Digitally Controlled PWM Converters ...

PETERCHEV AND SANDERS: **QUANTIZATION RESOLUTION** AND LIMIT CYCLING 303 (a) ...

[Cited by 126](#) - [Related Articles](#) - [Web Search](#) - [BL Direct](#)

[A multibit sigma-delta ADC for multimode receivers - all 4 versions »](#)

MR Miller, CS Petrie, M Inc, IL Schaumburg - Solid-State Circuits, IEEE Journal of, 2003 - [ieeexplore.ieee.org](#)

... The design objective is to determine a combination of sampling rates, filter order, and **quantizer resolution** that meets the full range of **resolution** and ...

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[High-resolution quantization theory and the vector quantizer advantage - all 4 versions »](#)

TD Lookabaugh, RM Gray - Information Theory, IEEE Transactions on, 1989 - [ieeexplore.ieee.org](#)

... In the next section we derive the vector **quantizer** advantages for constrained **resolution** systems under the r th power distortion measure, and justify the ...

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[A multi-bit sigma-delta modulator with interstate feedback](#)

L Fang, KS Chao - Circuits and Systems, 1998. ISCAS'98. Proceedings of the ... - [ieeexplore.ieee.org](#)

... oversampling ratio defined in octaves, n is the internal **quantizer resolution**, and k is the order of the modulator. To obtain a ...

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[High-definition video encoding system having color-sensitive quantization - all 2 versions »](#)

SV Naimpally, SL Ju, HY Kim - US Patent 5,294,974, 1994 - [freepatentsonline.com](#)

... A key component of this encoding system increases the **quantization** step size of image data, thus decreasing its **quantization resolution**, to reduce the number ...

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[A 13.5-bit cost optimized multi-bit delta-sigma ADC for ADSL](#)

A Wiesbauer, H Weinberger, M Clara, J Hauptmann, ... - Solid-State Circuits Conference, 1999. ESSCIRC'99. ..., 1999 - [ieeexplore.ieee.org](#)

... However, using a multi-stage AX modulator, the required **quantizer resolution** can be split up among the stages and an efficient implementation is possible. ...

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[A high resolution multibit sigma-delta modulator with individual level averaging - all 7 versions »](#)

F Chen, BH Leung - Solid-State Circuits, IEEE Journal of, 1995 - [ieeexplore.ieee.org](#)

... Second, **quantization** noise is reduced by 6 dB with every bit increase in **quantizer resolution**, and finally, the tone problem is alleviated [21]. ...

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[Effect of additive dither on the **resolution** of ideal quantizers - all 3 versions »](#)

P Carbone, D Petri - Instrumentation and Measurement, IEEE Transactions on, 1994 - [ieeexplore.ieee.org](#)

... In such a way the **quantizer resolution** and linearity are improved at the expense of both a reduced conversion rate and input range amplitude [11. ...

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[DCT video signal compression device with intrafield/interfield switching and adjustable high ... - all 2 versions »](#)

US Patent 5,005,076, 1991 - [freepatentsonline.com](#)

... since the buffer 10 can saturate in cases of images having a high information content, it is known to adjust the **quantization resolution** in **quantizer 4** (as ...

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[A 50-MHz multibit sigma-delta modulator for 12-b 2-MHz A/Dconversion - all 5 versions »](#)

BP Brandt, BA Wooley - Solid-State Circuits, IEEE Journal of, 1991 - [ieeexplore.ieee.org](#)

... **quantizer** to increase the dynamic range (DR) according to $DR \text{ Increase} = 20 \log(2N - 1) \text{ dB}$ (1) where N is the **resolution** of the multibit **quantizer** in bits. ...

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Key authors: [R Gray](#) - [T Lookabaugh](#) - [R Zamir](#) - [A Watson](#) - [A Peterchev](#)

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quantizer resolution

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embedded codebook

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[Image compression using a new discrete multiwavelet transform and anew **embedded** vector quantization - all 4 versions »](#)

K Bao, XG Xia - Circuits and Systems for Video Technology, IEEE Transactions ... , 2000 - [ieeexplore.ieee.org](#)

... In Fig. 2(b), denotes the t th codeword in the t th layer of the **embedded codebook**. ... that the given condition for the new layer of the **embedded codebook** can be met. ...

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[Speech classification **embedded** in adaptive **codebook** search for lowbit-rate CELP coding - all 2 versions »](#)

CC Kuo, FR Jean, HC Wang - Speech and Audio Processing, IEEE Transactions on, 1995 - [ieeexplore.ieee.org](#)

... Correspondence speech * Speech Classification **Embedded** in Adaptive **Codebook** Search for Low Bit-Rate CELP Coding - parameters LPC Analyzer /Quantizer - c ...

[Cited by 21](#) - [Related Articles](#) - [Web Search](#)

[Perceptual bit allocation for low rate coding of narrowband audio - all 3 versions »](#)

H Najafzadeh, P Kabal - Acoustics, Speech, and Signal Processing, 2000. ICASSP'00. ..., 2000 - [ieeexplore.ieee.org](#)

... narrowband audio coder proposed in [5], 120 trans- form coefficients are grouped into t,he critical bands and then vector quantized using an **embedded codebook**. ...

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[Diversity **Embedded** Space-Time Codes - all 4 versions »](#)

SN Diggavi, AR Calderbank, S Dusad, N Al-Dhahir - Information Theory, IEEE Transactions on, 2008 - [ieeexplore.ieee.org](#)

... 54, NO. 1, JANUARY 2008 Fig. 1. **Embedded codebook**. on two levels of diversity, but this procedure can be easily gen- eralized to more levels. ...

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[... set-partitioning with successive refinement Voronoi latticeVQ for **embedded** wavelet image coding - all 7 versions »](#)

D Mukherjee, SK Mitra - Image Processing, 1998. ICIP 98. Proceedings. 1998 ..., 1998 - [ieeexplore.ieee.org](#)

... refinement applica- tions such a; **embedded** coding or ... The lattice coset from which the **codebook** is actually ... determines the shape of the **code- book**, is referred ...

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[Diversity Embedding in Multiple Antenna Communications - all 4 versions »](#)

SN Diggavi, N Al-Dhahir, AR Calderbank - Advances in Network Information Theory: Dimacs Workshop ..., 2004 - [books.google.com](#)

... maximal diversity and rate $| \log | S |$ **embedded** within it. ... approach by examining a particular **codebook** design and ... We generate a random **code- book** X_a , $b = X_a + X_b$...

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[System for **embedded** coding of speech signals - all 4 versions »](#)

RD de Iacovo, R Montagna, D Sereno - US Patent 5,353,373, 1994 - freepatentsonline.com

... To implement the **embedded** coding, the excitation **codebook** is split into three partial codebooks. The first partial **codebook** contains ...

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[Digital image watermarking technique based on vector quantization](#) - [all 5 versions](#) »

ZM Lu, SH Sun - Electronics Letters, 2000 - paper.edu.cn

... image and the partition S determine the number of bits **embedded** in the watermarked image. Moreover, the VQ compression operation with the same **codebook** has no ...

[Cited by 55](#) - [Related Articles](#) - [Web Search](#) - [BL Direct](#)

[Fundamental limits of diversity-**embedded** codes over fading channels](#)

SN Diggavi, DNC Tse - Information Theory, 2005. ISIT 2005. Proceedings. ..., 2005 - ieeexplore.ieee.org

... $a(0), a(1), \dots, b(0), b(1), \dots$ Fig. 2. **Embedded codebook** For general SNR's, it is difficult to explicitly characterize the exact outage performance. ...

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[Embedded coding of speech: A vector quantization approach](#)

A Haoui, D Messerschmitt - Acoustics, Speech, and Signal Processing, IEEE International ..., 1985 - ieeexplore.ieee.org

... simplicity of the design make tree- expanded codebooks very attractive for the design of efficient **embedded** coders. The problem is that the **codebook** size for ...

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